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# USSR Report

AGRICULTURE

No. 1400

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## USSR REPORT

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## MAJOR CROP PROGRESS AND WEATHER REPORTING

### GRAIN HARVEST STARTED IN STAVROPOL AREA

Moscow IZVESTIYA in Russian 24 Jun 83 p 1

[Article by A. Ivashchenko and V. Oliyanchuk (Stavropol Kray): "Stavropol: Grain Harvest Has Begun"]

[Excerpts] The first combines have already gone out onto the fields of Stavropol and immediately established a high work rhythm. To harvest completely everything that has been raised--this is the main concern of workers of the kray today. Machine operators of the eastern rayons, where the grain crops ripen earlier, began mowing before the others did.

Everywhere in the kray the grain crops this year ripened ten days earlier than usual. In literally a couple of days the combines will begin to hum in all the other rayons, including Blagodarnenskiy, whose field workers were the initiators of the socialist competition for exemplary conducting of harvest-83. They promised to sell the state 105,000 tons of grain, mainly wheat of strong and valuable strains.

Comprehensive harvesting work is clearly envisioned by the harvesting plans of the Stavropol farms shown to us by the secretary of the party kraykom, B. Volodin. There are 815 complexes beginning the harvest, which join together 14,326 combines, almost as many tractors, more than 11,200 reapers and much other technical equipment. There will 21,500 trucks participating in the harvest work. It is intended to take 3-8 working days to mow the grain crops into swathes, and 9-15 to thresh them. The time periods for the work have been established for each of five soil and climate zones in the kray, and the ratio between the scope of individual harvesting and direct combining has been determined.

"The task that has been set is quite realistic," emphasized the secretary of the CPSU kraykom in a conversation, "since it is based on the comprehensive plans that were adopted by the kolkhozes and sovkhozes themselves, and mutual checking by the competing farms and rayons as well as on-the-spot intervention by RAPO councils have helped to eliminate preharvesting errors. Incidentally, under the conditions for the activity of the rayon agro-industrial associations one clearly sees the picture of closer contact of the kolkhozes and sovkhozes with their partners."

In the comprehensive plan for harvesting work they have also scrupulously determined the time periods for raking and ricking the straw, loosening the straw, turning over the semifallow and utilizing various kinds of technical equipment for each kind of technological operation. The technical equipment is not applied separately, but is joined together by teams and complexes for whom it is intended--for preparing the fields for planting winter crops, cultivating the fallow fields and turning over the late fall fallow.

"It is understandable," continued B. Volodin, "that all of our powerful technical equipment is good only if it is in strong experienced hands. Along with the farm managers, concern for training grain growing personnel and developing competition for exemplary preparation and conducting of the harvest has been manifested and is being manifested by party organizations, local soviets of people's deputies, trade unions and the Komsomol. Responsible tasks have been set for them by the decisions of the June (1983) Plenum of the CPSU Central Committee. Each harvest and transport complex has created teams for ideological support for the harvest and cultural and domestic service, temporary party groups, deputies' posts and people's control groups. They all have one goal--to give the country no less than 1.93 million tons of Stavropol grain. The farmers also intend to sell the state 221,000 tons of sunflower seeds, 55,000 tons of potatoes, 290,000 tons of vegetables and many other agricultural products."

Along with the harvest, mechanized detachments are continuing to work hard to prepare feeds, which should provide an abundance for the winter and increase the productivity of the public herd . . . .

The busiest and most responsible time has come for the workers of Stavropol--harvesting the crops. Behind them are the concerns caused by the dry autumn and the snowless winter, behind them are the unwavering concerns about each field of winter crops, the replanting of the areas that suffered from the bad weather, and the spring planting . . . . Grain growers of the kray have begun the harvest in a friendly and organized way, and in a good mood. In some places the first delay has been caused by the rain and in some places the downpours and the wind have harmed the planted areas. The harvesting does not promise to be easy. But has it ever been any other way in this steppe area? The main thing is that the farmers are trying to overcome the difficulties and harvest the entire crop.

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CSO: 1824/507

MAJOR CROP PROGRESS AND WEATHER REPORTING

BRIEFS

EFFECTIVE DEVICES--Stavropol--The most effective devices for utilizing the technical equipment determine the work schedule of the harvest period which began yesterday on the Stavropol steppes. [Text] [Moscow TRUD in Russian 20 Jun 83 p 1] 11772

WHEAT HARVEST--Stavropol--Farmers of the kray began yesterday to harvest the main crop of the Stavropol land--wheat. The spikes that have been raised are in convincing confirmation of the effectiveness of the introduction of zonal systems of farming which correspond to local soil and climate conditions. The changeover to crop rotations with clean fallow contributed to increasing the productivity of the fields. The spike crops are harvested from each field with a particular technology. [Text] [Moscow TRUD in Russian 2 Jul 83 p 1] 11772

STATE GRAIN--Stavropol--Grain from the main fields, the winter fields, has begun to come into the grain receiving points of the kray. More than 16,000 trucks are running along the routes "combine--threshing floor--state grain bins." In addition to kolkhoz and sovkhoz drivers they are being served by emissaries from industrial enterprises and specialized transportation organizations. All the large trucks and truck convoys, regardless of their departmental jurisdiction, have been placed under the leadership of the grain delivery administrations that have been created under the rayon staffs of harvest centers. Dispatchers are in charge of maneuvering the transportation. Each morning as they find out precisely the quantity of grain that has been threshed on the farms, determine the availability of loading equipment and, in keeping with this, distribute the trucks. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 5 Jul 83 p 1] 11772

ABOVE-PLAN GRAIN--Neftekumsk (Stavropol Kray)--Yesterday the farms of Neftekumskiy Rayon were the first in the kray to begin to sell grain to the state in excess of the plan. More than 17,000 tons of grain came from here. Almost all of it was strong and valuable strains. [Text] [Moscow TRUD in Russian 13 Jul 83 p 1] 11772

STAVROPOL MILLION--Stavropol--Machine operators of Stavropol celebrated the harvest time today with a double success: they sent their millionth ton of grain from the threshing floors to the elevators. The threshing of wheat has been completed on 1.5 million hectares. This year the spike crops on the

Stavropol steppes everywhere have been scorched by dry winds. But the field workers of Neftekumskiy and Levokumskiy rayons have already sold grain to the state in excess of the assignment. Many farms are striving to reach this goal. The guarantee of successful fulfillment of the plans for the sale of grain to the state lies in completing the harvest on schedule and preventing losses. The mechanized harvest-transport complexes still have to thresh more than one third of a million hectares of grain crops. Under the conditions of the continuing unusually severe summer heat, almost like in the south, the watch method of work helps. According to this method the combine operators replace one another every 3-4 hours. This will make it possible to complete the picking up of the swathes by the end of the week. [Text] [Moscow SOVET-SKAYA ROSSIYA in Russian 19 Jul 83 p 1] 11772

MILLION TONS OF GRAIN--Yesterday the millionth ton of Stavropol grain arrived at the grain bins of the homeland. Machine operators worked excellently in Neftekumskiy and Levokumskiy rayons which were the first in the kray to fulfill the plans for the sale of grain to the state. They are now delivering it to the elevators to be credited for increased commitments. Many kolkhozes and sovkhozes of the kray are now selling grain to the state in excess of the plan. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 19 Jul 83 p 1] 11772

STRAW DELIVERY--Stavropol Kray--There are now 1,933 sets of equipment employed in raking and delivering straw in the kray, and with their help 1.7 million tons of coarse feed will be prepared. The stubble is being loosened. Almost 15,000 tractors have been put to work. In order to accelerate the harvest bunker-accumulators and large carts have been delivered to the fields, all threshing floors have mechanized unloaders, and there are centers for control of the delivery of grain to the elevators. And about 17,000 trucks are transporting the grain. The commitments of the Stavropol workers are to sell the state 1.93 million tons of grain, including a million tons of grain of valuable and strong wheat. [Excerpt] [Moscow SEL'SKAYA ZHIZN' in Russian 24 Jul 83 p 1] 11772

IPATOVO SCHEDULE--The most effective devices for utilizing technical equipment determine the work schedule of the harvest time which began today on the Stavropol steppes. As usual, barley has ripened before the other grain crops. On considerable areas it has been scorched by the hot dry winds this year and has turned out to be thin and low-growing. Taking these circumstances into account, the combines that were sent out into the fields have been adjusted for "razor" cutting and have been equipped with adaptors to prevent losses. On the Kolkhoz imeni Ipatovo in Ipatovskiy Rayon the comprehensive detachment of V. Terstyshnikov received the highest points for preparation for the harvest from the review commission. It has become a tradition that two so-called substitute combines are assigned to the technical service team that has been attached to the complex. In the event of an unforeseen breakdown the master adjusters replace the basic aggregate with a "spare," and then they eliminate the disrepair. Thus the mowing and threshing proceed continuously. Such a reserve makes it possible to alleviate the critical personnel problem in harvesting work. [Text] [Moscow SEL'SKAYA ZHIZN' in Russian 28 Jul 83 p 1] 11772

HARVEST PROBLEMS--Stavropol--It is harvest time. It comes from the east along with the dry Astrakhan winds. This year their breath has been felt earlier than usual. A total of more than 180,000 people are fighting for the grain crops in Stavropol this year. The kray's commitments for this year include: selling the state 1.93 million tons of grain. It would seem that everything is arranged. There is enough technical equipment and transportation. This makes it even more frustrating to have interruptions at the start. "Our rayon is one of the first in the kray to begin the harvesting of grain crops," says the chief of the Kurskiy Rayon agro-industrial complex, V. P. Popov. "But on 28 June on the Kurskiy and Edisskiy sovkhozes the combines operated with interruptions since a large proportion of the trucks that serve them stood idle: there was no gasoline." Similar complaints are coming in from other rayons of the kray. The chief of the division of the chemical and petroleum industry of the Stavropol CPSU kraykom, V. M. Rakhno, says: "For days on end the Makhachkalinsk seaport has been filled with special trains carrying gasoline for our kray. They cannot be dispatched. They blame the lack of tank cars. The Makhachkalinsk workers should have sent us four trains by now, and only two days remain before the end of the quarter. There is no hope that we will receive all the fuel . . . ." [Excerpts] [Moscow SOVETSKAYA ROSSIYA in Russian 3 Jul 83 p 1] 11772

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## LIVESTOCK FEED PROCUREMENT

UDC 636.085.55

### IMPROVEMENT IN MIXED FEED PRODUCTION OPERATIONS CALLED FOR

Moscow ZHIVOTNOVODSTVO in Russian No 6, Jun 83 pp 35-36

Article by A.S. Myshelova, candidate of economic sciences at BelNIIEOSKh: "Distribution of Mixed Feed in Behalf of Output"

Text In the interest of successfully fulfilling the Food Program, great importance is attached to improving the work of enterprises of the mixed feed industry and increasing the production and improving the quality of the mixed feed.

The importance of mixed feed increases especially with converting animal husbandry over to an industrial basis. Compared to 1970 when mixed feed constituted 39 percent of the overall volume of concentrates used in animal husbandry in the Belorussian SSR, in 1975 -- 46 and in 1981 -- 57 percent. At the present time, poultry raising operations are being supplied fully with mixed feed, state hog raising complexes -- 96 percent and complexes for the fattening of large-horned cattle -- 85 percent. But the consumption of mixed feed at conventional farms, compared to the overall expenditures of concentrated feed, is still inadequate. In 1981 it amounted to 47 percent in dairy cattle husbandry, for the fattening of large-horned cattle -- 42 and in hog raising operations -- 64 percent.

In addition to increasing still further the consumption of mixed feed, equal importance is attached to improving the assortment of mixed feed. Taking into account the physiological, productive and other peculiarities of the individual types and age and sex groups of animals, the preparation of mixed feed is carried out using various recipes, which differ in terms of the required nutrients and microelements contained therein. However the requirements for preparing the mixed feed recipes for individual groups of animals are not always being observed. An analysis of the degree to which the republic's kolkhozes and sovkhozes are being supplied with mixed feed reveals that the assortment does not conform fully to the animal husbandry requirements. For example, the mixed feed requirements for all types of animals in 1980-1981 were satisfied by 54 percent. Such a violation in the assortment for mixed feed production leads to the use of such feed for purposes other than those originally intended. In 1981, 45 percent of the mixed feed prepared for the fattening of hogs was fed to large-horned cattle.

The incorrect use of mixed feed is explained by a number of factors. Under conditions involving a shortage of protein-vitamin additives, the industrial

enterprises are oriented more towards the production of simple mixed feeds at the expense of complex feeds. The existing system for forming the wholesale prices for mixed feed does not interest the enterprises in increasing their production according to complex recipes, since the normative production expenses and planned savings are computed per ton of mixed feed regardless of its quality. At the same time, as the recipes for preparing the mixed feed become more complicated, the technology for producing it also becomes more complicated and the expenses increase.

One reason for failure to observe the required assortment and also for the low quality in the mixed feed produced is the absence of direct links between the suppliers and consumers. The kolkhozes and sovkhozes do not possess adequate rights for requiring the enterprises to fulfill their orders for mixed feed based upon production interests and are forced to rely upon the established distribution. Ideally, a plan should be established for each farm for mixed feed deliveries on a centralized basis. This requires the development of scientifically sound methods for distributing the mixed feed.

In connection with the distribution of mixed feed, an attempt should be made first of all to smooth out the conditions of management. One cannot recognize as adequately sound the existing disparities in supplying the farms with mixed feed. For example, in 1981 23 percent of the sovkhozes received less than 2 quintals of mixed feed per average annual cow, 37 percent -- 2.1-4, 20 percent -- 4.1-6, 9 percent -- 6.1-8 and 11 percent of the farms -- 8-10 quintals. The level of support in the form of mixed feed for young large-horned cattle stock at individual farms differed by a factor of 5 and this affected the productivity level of the animals.

A definite degree of stability must be maintained with regard to supplying animal husbandry with mixed feed. An increase in the production of animal husbandry products must be accompanied by an increase in the mixed feed delivery volumes.

When distributing the mixed feed, equal importance is attached to intensifying the interest of the farms in raising the return from such feed in the form of output. Mixed feed must be used not so much for eliminating a shortage in internally produced feed, but mainly for improving the degree of balance in the ration.

In order to achieve this goal, mixed feed must be allocated for the production of animal husbandry products: for a planned volume of production or procurements -- during the planning stage and during the course of supplying the farms. Obviously, this requires sound normatives for allocating the mixed feed per unit of output.

When establishing the normatives, the mixed feed used for special purposes must not be taken into account: for the production of goods obtained on an industrial basis, for the sale or barter in the established manner of field crop husbandry products (sugar beets, buckwheat, grass meal, seed for perennial grasses, spinning flax and others) and for creating reserves. The remaining portion of the mixed feed should be distributed among the non-specialized farms in behalf of the principal products of the farms.

Based upon the above-mentioned methodological approaches, we recommend the allocation of 0.7 quintals per ton of milk, 6.8 per ton of increase in live weight in large-horned cattle and 16 quintals of mixed feed per ton of increase in live weight in hogs. Certainly, the mentioned norms can be changed and yet the approaches used for validating them must promote a strengthening of planning and contractual discipline in the relationships between the agricultural and mixed feed enterprises and increased responsibility on their part for the final production results.

At the same time, the average specific normative established for mixed feed should ideally be differentiated depending upon the reimbursement level achieved for all of the feed, so as to interest the farms in utilizing the feed in a more efficient manner. An analysis of the existing level of reimbursement for feed in the form of animal husbandry products reveals great reserves available for economizing in the use of feed. The data for 1980-1981 reveals that the feed expenditures for obtaining 1 quintal of milk at some farms fluctuates from 116 to 207 feed units, for 1 quintal of weight increase in large-horned cattle -- from 850 to 2,490 feed units and for 1 quintal of weight increase in hogs -- from 610 to 2,170 feed units.

In order to establish differentiated normatives for the distribution of mixed feed, use is made of data on feed consumption per unit of animal husbandry product produced on the farms over a period of 3-5 years. Accordingly, the differentiated normatives are determined depending upon the deviations in specific feed expenditures for each group from the average figures for the total number of farms. The computations carried out in this manner make it possible to establish the following norms for the distribution of mixed feed in behalf of animal husbandry output (see Table on following page).

Based upon the developed normatives and the established tasks for the production of animal husbandry products, each farm must be provided with a mixed feed delivery plan on the whole and in conformity with an appropriate assortment. It can be reexamined only in connection with a change in the tasks for output production. In the process and based upon agreements, an opportunity is created for achieving more strict coordination in the production and deliveries of mixed feed, in the assortment required for animal husbandry, as a necessary condition for raising the return from the feed in the form of products.

Further improvement must be achieved in solving the problem of raising the interest of the mixed feed enterprises in improving the quality of the mixed feed being made available. The requirements for feed quality are set forth in the GOST's /all-union state standard/, in which the optimum norms for nutrient content are also set forth. However, for all practical purposes they are not always being observed. In the face of a shortage of components and by agreement on the part of interested departments, permission has been granted to prepare the mixed feed with deviations from the quality standards set forth in the GOST's. Such recipes are being used for producing 25-30 percent of the overall volume of mixed feed. The principal portion of the mixed feed, considered to be insufficiently valuable in terms of nutritional content, is being prepared according to simple recipes. As a rule, components of the grain group predominate in this feed, while the protein-vitamin additive content (oil-cake, oil-seed meal, meat and bone meal, fish meal, products of the microbiological industry) is low. For example, in 1976-1981 the amount of

such additives in the overall volume of mixed feed produced amounted to 17 percent, with the grain group occupying 83 percent. Meanwhile, as a maximum normative, the expenditure of grain must not exceed 79 percent.

Normatives for Distribution of Mixed Feed Per Unit of Animal Husbandry Output

Производство молока (1)		Прирост крупного рогатого скота (2)		Прирост свиней (3)	
расход кормов на производство 1 т в (корм. ед.)	норматив распределения комбикормов (кг на 1 т молока)	расход кормов на производство 1 т (корм. ед.)	норматив распределения комбикормов (кг на 1 т прироста)	расход кормов на производство 1 т (корм. ед.)	норматив распределения комбикормов (кг на 1 т прироста)
(7) До 110	0.9	До 1000	9.3	До 1000	20.5
121-140	0.7	1010-1200	7.3	1010-1200	13.3
141-160	0.6	1210-1400	6.3	1210-1400	11.4
161-180	0.5	1410-1600	5.5	1410-1600	10.0
(8) Свыше 180	0.4	1610-1800	4.8	1610-1800	8.7
		Свыше 1800	3.7	Свыше 1800	6.8

Key:

- 1. Milk Production
- 2. Increase in large-horned cattle
- 3. Increase in hogs
- 4. Feed consumption for production of 1 quintal (feed units)
- 5. Normative for distribution of mixed feed (quintals per ton of milk)
- 6. Normative for distribution of mixed feed (quintals per ton of increase)
- 7. Up to 110
- 8. More than 180

The leaders of enterprises usually blame the preparation of low quality feed on the absence of the required raw materials and a shortage of protein-vitamin additives. However, there are also other reasons. The mixed feed enterprises are not interested in successfully solving these problems. Their income, on which their economic interests are based, is determined by the amount of mixed feed delivered and is not dependent upon its quality. The economic status of the mixed feed enterprises is constantly being strengthened and yet the proper return from the use of mixed feed is not being ensured in agricultural production.

In the interest of creating more equal economic operating conditions for allied branches of the agroindustrial complex, the mixed feed enterprises must display greater interest in raising the quality of the products being produced and their income must be based upon this indicator. The accounting for mixed feed must be carried out in a manner such that it is more profitable for the industrial enterprises to produce mixed feed according to complex recipes. Moreover, of all of the elements of the wholesale price of mixed feed enterprises, the amounts of the planned savings should ideally be changed depending upon the quality of the feed. Taking into account the diverse indicators for mixed feed quality and the complexity of reducing them to a single measurement gauge, this indicator can be determined indirectly. Since the use value of mixed feed is raised with an increase in its structure of the non-grain group, this must serve as the basis for differentiating the planned savings.

Computations indicate that if the proportion of the non-grain group in the mixed feed is less than 10 percent, the planned savings per ton of mixed feed should be established in the amount of 2 rubles, from 10 to 15 percent -- 3, 15-20 percent -- 4, 20-25 percent -- 5, 25-30 percent -- 6, 30-35 percent -- 7 and in excess of 35 percent -- 8 rubles. No planned savings should be created for mixed feed the actual quality of which does not conform to the recipes.

For the kolkhozes and sovkhozes it is equally important for the mixed feed to cost less and this must also be of equal interest to the mixed feed enterprises. Under conditions where an evaluation of their work is conducted on the basis of normative net output, which determines the production volume, labor productivity and the wage fund in the economic incentive mechanism, the role played by wholesale prices is lowered. In the mixed feed industry, this is also promoted by the system for their formation, in which the raw materials are included in the price according to their actual cost. Hence, in the formation of profit, which is the principal source for developing production and for forming the economic incentive funds, the role played by economies in expenditures is limited, since the cost of the raw materials constitutes 95-96 percent of the production cost for the mixed feed. Planned savings, guaranteed through the wholesale price, remain as the chief source of profit.

In order to intensify the role played by economies in expenditures, in forming the profit of mixed feed enterprises and raising their interest in reducing the cost of mixed feed for the consumers, through a more efficient combination and utilization of raw materials, we are of the opinion that use should be made within the system of economic levers and stimuli of stable wholesale prices for the mixed feed, prices which must perform the function of stimulating normatives.

In the case of a reduction in the accounting prices compared to stable prices, the savings must be distributed among the agricultural and mixed feed enterprises. For example, the stable price for mixed feed for laying hens is established at 148 rubles per ton. If the accounting price is 140 rubles, then the farms must pay 142 rubles per ton for the mixed feed (with a distribution of the savings among the mixed feed and agricultural enterprises of 25 and 75 percent respectively). In the event the accounting price exceeds the stable price, a portion of the reduction in price is applied to the results of the mixed feed enterprises. The proportions for the distribution of savings and for the reduction in price must match the potential of the mixed feed enterprises for achieving economies in the use of raw materials. But here the percentage of reimbursement for them for the reduction in price should be somewhat higher than the percentage for distribution of the savings realized. This channels their economic interests towards lowering the prices for the mixed feed.

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ROLE OF MICROBIOLOGICAL INDUSTRY IN MIXED FEED PRODUCTION TECHNOLOGY

Moscow MUKOMOL'NO-ELEVATORNAYA I KOMBIKORMOVAYA PROMYSHLENNOST' in Russian  
No 6, Jun 83 pp 9-10

Article by E. Kuznetsov, deputy chief of the Technical Administration of the Main Administration of the Microbiological Industry: "Microbiological Industry -- For Mixed Feed Enterprises"/

Text During the regular meeting of the Politburo of the CPSU Central Committee, which convened in May, emphasis was placed upon the great role played by the microbiological industry and the products produced by it in solving the tasks concerned with creating a strong feed base for animal husbandry. Criticism was directed at the work being performed by the Main Administration of the Microbiological Industry, which is lacking in a business-like attitude, purposefulness and exactingness in carrying out the state planned tasks and in introducing scientific and engineering achievements and progressive forms for labor organization into production operations.

In the decree which was adopted, the Politburo of the CPSU Central Committee outlined measures for improving the work of the microbiological industry and intensifying the responsibility of the leaders of all elements of the administrative staff associated with this branch.

The article herewith published sets forth a number of measures aimed at improving satisfaction of the requirements of the mixed feed industry for the raw materials being supplied by enterprises of Glavmikrobioprom Main Administration of the Microbiological Industry/ and improving the quality of these materials.

In solving the chief problem concerned with further improving the well-being of Soviet people, the party assigned the national economy the following task for the 11th Five-Year Plan -- to increase considerably the production of agricultural products. The USSR Food Program, the implementation of which is considered to be of great importance by the CPSU Central Committee, is promoting the successful achievement of this goal. This program must ensure

a considerable increase in the production of farming and animal husbandry products and, as noted during the 26th party congress, draw agriculture closer to the other branches.

An important role within the agroindustrial complex, which must solve the problem of further raising agricultural production, will be played by the microbiological industry -- the branch which appeared during the period in which the entire country was actively engaged in implementing the historic decisions handed down during the March (1965) Plenum of the CPSU Central Committee. Within a brief interval of time, the heavy tonnage production of fodder protein, amino acids, vitamins, fermentation preparations, antibiotics, biological agents for protecting plants and other products of microbiological synthesis was created within the branch.

During the period that has elapsed, the production of nutrient yeasts in the country has increased by a factor of 12, fermentation preparations -- by almost 40, antibiotics -- by a factor of 10, with 75 percent of all products being delivered to agriculture.

During the 1st year of the 11th Five-Year Plan, more than 1 million tons of microbiological fodder protein were produced for the very first time. This made it possible to obtain more than 20 million tons of full-value mixed feed and, on this basis, to produce approximately 1 million additional tons of meat at the kolkhozes and sovkhozes and to realize a savings of 5-7 million tons of forage grain.

The implementation of the Food Program has raised the need for further increasing the production of the products of microbiological synthesis.

During the next few years, workers attached to the microbiological industry must carry out a great amount of work aimed at increasing the production of highly effective feed additives, veterinary and fermentation preparations and premixes.

The plans call for the tense program for increasing the production of fodder protein to be carried out by making use of new raw material sources and increasing the existing production of nutrient yeasts from N-paraffins and hydrolyzates of plant raw materials.

At the present time, the use of 1 ton of nutrient yeasts in the production of mixed feed is making it possible to save 5-7 tons of forage grain, obtain additionally, depending upon the purpose, 1.5 tons of poultry meat, 0.8 tons of pork, 0.25 tons of large-horned cattle meat or 30,000 eggs and in the process to reduce the fattening period for hogs by 24 days, poultry -- by 10-12 days and for large-horned cattle -- by 15 days.

Each ton of lysine used in mixed feed makes it possible to realize a savings of not less than 125 tons of grain, to obtain additionally 10-16 tons of pork, 8 tons of poultry meat or 250,000 eggs and it replaces 12-14 tons of fish meal or oil-seed meal, or 15-16 tons of nutrient yeasts. Similar results are produced through the use of threonine and tryptophan in feed. Thus the use of 1 ton of tryptophan makes it possible to obtain 422 additional tons of poultry meat. The use in mixed feed of 1 kilogram of antibiotics reduces the disease rate in livestock and poultry by 0.5-4.0 percent, with their weight

increases during fattening being raised by 5-20 percent and feed expenditures being lowered by 30 percent.

The introduction into mixed feed of 1 kilogram of premixes produces an increase in weight gain in hogs of 15-20 percent, in large-horned cattle -- of 13-17 percent, in the milk yields of cows of 10-16 percent and in increased egg production -- of 13-15 percent, with an improvement in quality and with the savings in feed amounting to 10-15 percent per unit of premixes.

According to the results of scientific studies, the plans for the 11th Five-Year Plan call for the introduction into operations of a number of progressive methods for producing fodder protein. For example, the plans call for the introduction of a continuous technology for the production of nutrient yeasts made out of synthetic methanol and ethanol and also from natural gas. The plans also call for the introduction of a technology for the production of pure amino acids for feed and medical purposes.

The scientific-technical measures carried out will make it possible to raise considerably the technical level of production. The yield of yeasts from 1 ton of N-paraffins will reach 100 percent and the average protein content in the yeasts will increase by 56-63 percent. The plans call for a considerable amount of additional nutrient yeasts to be obtained by improving the quality of the protein and lowering the expenditure indicators for N-paraffins.

The production of amino acids calls for the mastering of a new type of raw material -- acetic acid, instead of molasses which is being used at the present time.

In order to raise the nutritional value of the feed, the plans call for the production of protein-fermentation preparations based upon the use of cotton husks and forage grain, fodder hydrolytic sugar made from wood raw materials and plant-protein feed.

The number of fermentation preparations is expected to increase by more than twofold. Of the new preparations, an increase will take place in the production of celloviridine GZx, MEKa (mixture of cellofiridine GZx and pectofoetidine GZx). In order to satisfy the requirements of the fishing industry, the plans call for protosubtiline GZx to be obtained in a mixture with PTK-1 premix.

The production of feed antibiotics -- bacitracin and kormogrizine -- will undergo further development. For the prevention of diseases and treatment of animals and poultry, the production of veterinary preparations is being expanded and particularly antibiotics -- tilosine, frasidine, propiatside preparations, propiovite, acidophilin and medical lignin -- polyphan.

One promising trend for supplying animal husbandry with protein is that of developing microbiological methods for utilizing the waste products of agriculture. In the USSR, 200-150 million tons of straw are being obtained annually. The fermentative hydrolysis of straw with subsequent yeast is making it possible to obtain feed bulk containing 10-12 percent protein. The processing of only one fifth of the straw resources can furnish 50 million tons of valuable feed containing roughly 5 million tons of protein.

Tremendous opportunities are becoming available for utilizing fermentation preparations in animal husbandry. Over the past few years they have undergone extensive production testing using various livestock feeding methods and they have received good evaluations. The use of fermentation preparations, which break down cellulose to sugars, is introducing substantial corrections to the concept of a sugar minimum and making it possible to ensile difficult-to-ensile plants. The addition of fermentation preparations will make it possible to raise considerably the nutritional value of such production waste products as beet pulp residue, sunflower husks and wood filings and at the same time it will increase the feed resources for animal husbandry.

The prospects are fine for the use of fermentation preparations in the raising and fattening of fish. Studies carried out on the use of pectoavamorine P10x and protosubtiline GZx in the raising of carp and trout produced positive results: the weight gains in the carp increased up to 30 percent.

A complex of measures has been developed for further raising the quality of the products being produced by enterprises of Glavmikrobioprom. Normative-technical documentation is being prepared which calls for raised requirements for the products being produced.

In the interest of further improving departmental control over observance of the standards and technical conditions and also over the quality of the products, a branch department has been organized for exercising technochemical and microbiological control in a section of one of the branch scientific-research institutes and it has been defined as being the leading organization for departmental control.

A most important condition for implementing the Food Program is that of decisively converting over to the use of intensive factors for accelerating scientific-technical progress. This confronts the branch's scientists with new and responsible tasks. A considerable volume of scientific-research work must be carried out in connection with finding new raw material resources for obtaining feed protein and amino acids and introducing into production operations highly productive strains, new models of highly productive equipment, KIP /control and measuring instruments/ equipment and automation equipment. A requirement will exist for intensifying existing and creating new production efforts based upon continuous waste-free technologies, for improving the quality of the preparations being produced and their marketable forms and making them suitable for use and also for creating new and effective means for raising productivity and for preventing and treating diseases in livestock and agricultural crops.

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## REGIONAL DEVELOPMENT

### DECREE OF SUPREME SOVIET, BELORUSSIAN SSR, ON FOOD PROGRAM DEVELOPMENT

Minsk SOVETSKAYA BELORUSSIYA in Russian 2 Jul 83 p 2

Article by I. Polyakov, chairman of the Presidium of the BSSR Supreme Soviet and Ye. Chagina, secretary of the Presidium of the BSSR Supreme Soviet: "Work of the Soviets of People's Deputies of the Belorussian SSR in Implementing the Food Program"

Excerpt In conformity with the requirements set forth in the decree of the Presidium of the USSR Supreme Soviet entitled "Tasks of the Soviets of People's Deputies in Implementing the Decisions of the May (1982) Plenum of the CPSU Central Committee," the republic's local soviets of people's deputies examined the problems associated with the carrying out of the Food Program and outlined specific measures for its implementation. The Food Program for the Belorussian SSR for the period up to 1990 and special purpose all-round programs for the accelerated development of a number of agricultural branches, for transforming it into a highly efficient sector of the economy and for the formation and organizational strengthening of the agroindustrial complex have been developed and approved. A committee on Problems of the Agroindustrial Complex of the Presidium of the BSSR Council of Ministers has been created and oblast and rayon agroindustrial associations and their councils formed. Within the administrative system for branches of the agroindustrial complex, trusts, associations and parallel and duplicative elements which did not justify their existence have been abolished. This has made it possible to strengthen the rayon echelon of control, develop considerably the economic independence and initiative of kolkhozes and sovkhozes and create favorable economic, social and organizational conditions for their efficient operation. Better coordination has been achieved between the ministries and departments of the agroindustrial complex, their local organs and subordinate enterprises and organizations in searching for and utilizing production reserves and ensuring fulfillment of the state plans and socialist obligations.

The soviets of people's deputies and their executive committees and permanent committees are directing administrative-organizational and political-educational work towards raising the efficiency of agricultural production, strengthening the logistical base for agriculture and the kolkhoz and sovkhoz economies, expanding the democratic principles of their activity, improving production organization and administration, intensifying production specialization and concentration based upon inter-farm cooperation and agro-industrial integration and introducing scientific and engineering achievements

and leading experience into the branches of the agroindustrial complex. In addition, they are ensuring the implementation of measures directed towards the social transformation of the rural areas, raising the well-being of rural workers and developing the private plots of citizens and also the subsidiary farms of enterprises, organizations and institutions.

The work carried out by the soviets of people's deputies and their organs in connection with implementation of the Food Program has exerted a positive effect on the operational results of the republic's entire agroindustrial complex.

Compared to 1980, the logistical base for agriculture was strengthened considerably in 1982: capital supply for the kolkhozes and sovkhozes increased by 15 percent, power supply -- by 13.4 percent. Greater quantities of mineral and organic fertilizers were applied to the soil. The volume of gross agricultural output increased by 483 million rubles. Increases took place in the production of grain, vegetables, fruit, berries, meat and eggs. The 1982/83 cattle wintering operations and their conversion over to pasture maintenance were carried out successfully. During 5 months of 1983, milk and egg production increased by 6 percent compared to the corresponding period for last year and meat -- by 10 percent. A total of 129,000 more tons of milk, 39,000 more tons of meat, and 27 million more eggs were sold to the state during this period than during 1982. Increases took place in the numbers of all of the principal types of livestock and poultry. This year the spring sowing of agricultural crops was carried out in a timely and high quality manner, the first cutting of grasses has been completed and considerably greater volumes of feed are being procured.

The program for the social transformation of the rural areas and for improving the well-being of the workers is being implemented in a consistent manner. The wages at kolkhozes and sovkhozes and the real income of kolkhoz members and sovkhoz workers are increasing. The construction volumes for apartment dwellings and facilities of a cultural-domestic nature are increasing. During the 1981-1982 period, 2.7 million square meters of apartment living space, childrens' pre-school institutes for 19,000 children, palaces of culture and clubs for 14,400 occupants, public catering enterprises for 7,600 customers, stores for 45,900 square meters of trade space, hospitals for 1,815 beds and out-patient polyclinic institutes for 3,200 visits per shift were placed in operation in the rural areas. The plans for constructing hard surface roads and access roads for the central farmsteads of kolkhozes and sovkhozes and for placing in operation automatic telephone stations and also other installations were fulfilled.

While assigning a positive evaluation to the results already achieved, the Supreme Soviet of the Belorussian SSR at the same time notes the existence of substantial shortcomings and areas of neglect in the work being carried out by some local soviets throughout the republic and their executive and administrative organs in implementing the Food Program. The style and methods of their operations still do not conform fully to the requirements of the 26th party congress, the May and November (1982) and June (1983) Plenums of the CPSU Central Committee or the 14th Plenum of the Central Committee of the Communist Party of Belorussia. The mass organizational work being carried out

by a number of soviets does not always ensure high final results, the use of a comprehensive approach for solving vital problems or improvements in management and administration in the agroindustrial complex. Measures aimed at bringing about a sharp change towards the use of intensive methods for managing production operations are being implemented slowly; proper initiative and persistence are not being displayed in searching for reserves for raising the fertility of lands and productivity of agricultural livestock; insufficient work is being carried out with regard to uncovering and eliminating shortcomings in the area of procurements and storage, transporting, processing and sale of agricultural products, intensifying the regime for economies and thrift and strengthening state and labor discipline.

Some soviets of people's deputies and their organs are not undertaking the proper measures aimed at further improving interrelationships, creating stable economic contacts between the kolkhozes and sovkhozes on the one hand and enterprises and organizations belonging to the agroindustrial complex on the other and introducing cost accounting procedures and wage systems based upon final production results. Very little attention is being given to improving the economies of unprofitable and low-profitability farms. A considerable number of the republic's kolkhozes and sovkhozes are still not coping with the plans for selling agricultural products to the state. In a number of areas the socialist competition is very formal in nature and does not always promote improvements in the efficiency or quality of the work, the creation of a healthy moral-psychological climate or moral improvements in the labor collectives.

Insufficient use is being made of the opportunities afforded by the subsidiary farms of enterprises, organizations and institutes, the private plots of citizens or the horticultural societies of manual and office workers for augmenting the food resources.

A number of local soviets of people's deputies and their executive committees, ministries and departments are not devoting proper attention to improving the social-domestic living conditions of the rural population and they are not undertaking exhaustive measures aimed at carrying out the established tasks for housing and cultural construction in the rural areas and the construction of installations of a production nature.

The oblast and rayon soviets of people's deputies are still not providing adequate assistance to the agroindustrial associations in improving their activities or in utilizing the rights and powers extended to them and, as a result, many of them are operating on the basis of obsolete methods and copying the operational forms and methods of the former agricultural administrations. During meetings of the councils of agroindustrial associations, problems of a secondary and unimportant nature are examined and insufficient attention is given to the basic problems concerned with further development of the agroindustrial complexes of the oblasts and rayons.

Further improvements are required in the work being performed by the Committee on Problems of the Agroindustrial Complex of the Presidium of the BSSR Council of Ministers and particularly in connection with improving coordination of the work of the ministries and departments belonging to the agroindustrial complex,

intensifying the economic methods of administration, eliminating isolation and duplication in planning, financing and logistical supply for the agroindustrial complex.

The Supreme Soviet of the Belorussian Soviet Socialist Republic decrees:

1. That the soviets of people's deputies of the Belorussian SSR will consider one of their principal operational tasks to be that of consistently implementing practical measures aimed at implementing the decisions of the May (1982) Plenum of the CPSU Central Committee and mobilizing the workers in the interest of the successful implementation of the Food Program. To concentrate the attention of the soviet and economic organs on further raising the level of organizational work associated with achieving proportional and balanced development for all sectors of the agroindustrial complex and unconditional fulfillment of the plans and socialist obligations for the production and procurements of agricultural products during 1983 and the 11th Five-Year Plan on the whole.
2. That the Presidium of the Supreme Soviet of the Belorussian SSR will ensure more active participation by the local soviets of people's deputies and their organs in solving the tasks concerned with raising the efficiency of agricultural production, organizing a socialist competition for the labor collectives of the agroindustrial complex for ensuring steady growth in labor productivity and achieving high final results and devoting more attention to summarizing and disseminating the operational experience of the soviets and their permanent committees and deputies in implementation of the Food Program.
3. That the BSSR Council of Ministers and the Committee for Problems of the Agroindustrial Complex of the BSSR Council of Ministers will ensure the preparation of draft annual plans for the economic and social development of the republic and a draft plan for the 12th Five-Year Plan, based upon the tasks called for in the Food Program for the Belorussian SSR for the period up to 1990 and the need for achieving a more thorough conversion of all sectors of the national economy over to solving the problems concerned with further improvements in agricultural production and the development of the republic's agroindustrial complex on the whole; to achieve maximum improvements in the work of the republic's ministries and departments and the executive committees of the local soviets of people's deputies; achieve efficient interaction among all elements of the agroindustrial complex in the interest of further intensification of agriculture, the more active introduction of industrial technologies into farming and animal husbandry operations, increase the production of agricultural products and food goods, raise their quality, improve the storage of products and eliminate product losses.
- .. That the local soviets of people's deputies for the Belorussian SSR and the Committee for Problems of the Agroindustrial Complex of the Presidium of the BSSR Council of Ministers furnish more assistance to the agroindustrial associations in further improving the style and methods of their activities, raising the role played by these associations in solving the all-round tasks concerned with the development of agricultural production and the associated sectors, staffing the agricultural administrations of the executive committees of oblast and rayon soviets of people's deputies with highly skilled personnel; intensifying management and control over the activities of enterprises, institutes and organizations of the agroindustrial complex in

carrying out the plans for economic and social development and also measures for improving the economies of backward farms; strengthening interaction between permanent committees, deputies, committees, people's control groups and posts and professional trade union organizations. Problems associated with implementation of the Food Program are systematically reviewed during sessions of the soviets and meetings of the executive committees and permanent committees, with fulfillment of the decisions adopted on solving the problems of agricultural development being sought on a persistent basis.

5. That the local soviets of people's deputies of the BSSR and their organs devote more attention to introducing scientific achievements and leading experience, intensive methods for farm management and collective contracts in kolkhoz and sovkhoz production into the sectors of the agroindustrial complex, achieve highly efficient utilization of the land, production capabilities and labor, material and financial resources and achieve an increase in the level of mechanization and automation of production processes. Promote in every possible way the development of subsidiary farms of enterprises, organizations and institutes and also the private plots of citizens. Undertake exhaustive measures aimed at creating a strong feed base for animal husbandry and the timely and high quality carrying out of current agricultural operations.

6. That the local soviets of people's deputies ensure consistent implementation of the measures aimed at achieving social development of the rural areas and further raising the level of well-being, culture, medical and domestic services for the rural residents; achieve unconditional fulfillment of the planned tasks for the construction of apartment buildings and other installations of a social nature and also roads. To raise the prestige of agricultural labor in every possible way and to introduce in a more active manner an efficient regime for work and recreation for workers at kolkhozes and sovkhozes.

7. That the soviets of people's deputies, in conformity with the requirements of the November (1982) and June (1983) Plenums of the CPSU Central Committee and the USSR law concerning labor collectives and raising their role in the administration of enterprises, institutes and organizations, persistently improve the forms and methods for organizational and mass-political work; achieve a further strengthening of state, labor and production discipline, raise the role played by labor collectives in the communist upbringing of the masses, make more extensive use of the opportunities afforded by cultural institutes, radio, the press and television for carrying out educational work in the areas where the citizens live, devote more attention to strengthening contacts with the masses, ensuring that the work of the soviets is publicized, ensure that reports are delivered on a regular basis to the population and the voters by the executive committees, their departments and administrations, deputies and the leaders of enterprises, institutes and organizations; to achieve active participation by all workers attached to the agroindustrial complex in implementing the plans for economic and social-cultural construction and in carrying out the tasks associated with the Food Program.

8. That the Council of Ministers for the Belorussian SSR will examine the proposals and comments expressed during a session of the Committee concerning agriculture by the deputies of the Supreme Soviet of the Belorussian SSR and adopt appropriate decisions based upon them.

The Supreme Soviet of the Belorussian Soviet Socialist Republic is firmly convinced that the soviets of people's deputies, their organs and all of the republic's workers, closely united around the Communist Party and its Central Committee and the Politburo of the CPSU Central Committee, headed by Comrade Yu.V. Andropov, will devote all of their efforts towards successfully implementing the decisions handed down during the May (1982) and June (1983) Plenums of the CPSU Central Committee and make a worthy contribution towards carrying out the Food Program of the USSR.

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## REGIONAL DEVELOPMENT

### SPEECH OF BELORUSSIAN OFFICIAL ON PROGRESS OF FOOD PROGRAM

Minsk SOVETSKAYA BELORUSSIYA in Russian 1 Jul 83 p 2

Speech by Yu.M. Khusainov, 1st deputy chairman of BSSR Council of Ministers and chairman of the Committee on Agroindustrial Complex Problems of the Presidium of the BSSR Council of Ministers: "The Work of the Soviets of People's Deputies in the Belorussian SSR in Implementing the Food Program"

Excerpts The Central Committee of the Communist Party of Belorussia and the republic government are devoting a great amount of attention to current problems and to the future development of agriculture and its associated branches. Over the past 6 months, with their direct participation, an extensive feed production program has been developed and is now being implemented. Decrees have been adopted and are now being implemented in connection with housing construction in the rural areas, increasing the production and improving the supply of vegetables, fruit, berries and early potatoes for the republic's population and increasing the production of animal husbandry products.

The Presidium of the Supreme Soviet of the republic has approved measures aimed at further increasing the role played by the local soviets and their organs in implementing the Food Program. In conformity with the decisions handed down during the May Plenum of the CPSU Central Committee, the necessary changes have been introduced into the legislative documents concerning the powers of the oblast and rayon soviets in the management of agriculture and other branches of the agroindustrial complex. The Presidium and the committee of the republic's Supreme Soviet are systematically discussing the problems associated with implementation of the Food Program.

All of the above are producing positive results, according to the speaker. Compared to 1980, gross agricultural output increased by 483 million rubles in 1982 and increases were recorded in the production of grain, vegetables, fruit, berries, meat and eggs. Thus it became possible to improve the supply of products for the population.

A fine basis has been established this year for obtaining the planned yields. The production of animal husbandry products is increasing. Improvements are being noted in the production-financial activities of the kolkhozes and sovkhozes and their logistical base is becoming stronger. The rural areas are undergoing a general reorganization, with improvements being carried out in the

housing, domestic and cultural conditions. For unless solutions are found for the problems in this area, it is difficult to retain skilled personnel on the farms or to create stable collectives on each farm. Over the past 2 years, 2.7 million square meters of apartment space and children's pre-school institutes for 19,000 children were placed in operation in the rural areas. New clubs and palaces of culture, public catering enterprises, stores and public health stations were built. The plans for 2 years for the construction of hard surface roads and approach roads to the central farmsteads of sovkhozes and kolkhozes and also other installations for the infrastructure in the rural areas were fulfilled.

Notwithstanding the work already carried out, many shortcomings still persist in agriculture. This was the subject of a basic and yet important discussion held during the 14th Plenum of the Central Committee of the Communist Party of Belorussia. The reasons for the neglect noted in the work of the soviet and economic organs were uncovered and methods were defined for solving the urgent problems. Special attention was given to raising the responsibility of personnel at all levels of the agroindustrial complex for fulfillment of the plans for the five-year plan.

Maximum improvements in soil fertility are greatly dependent upon the introduction of scientifically sound farming systems in all areas. Under our conditions, this includes mainly the persistent mastering of efficient crop rotation plans, improvements in the structure for the areas under crops, the organization of industrial seed production, the introduction of new and highly productive varieties and hybrids out on the fields, the extensive use of industrial technologies in the cultivation of agricultural crops and the efficient use of reclaimed lands, mineral and organic fertilizers, technical means and progressive forms for labor organization and wages. Meanwhile, in our work many teams are dropping out of this integrated system. Crop rotation plans have been mastered throughout the republic on 72 percent of the arable land. In Ushachskiy, Tolochinskiy, Chausskiy, Volozhinskiy, Cherikovskiy and Drogichinskiy Rayons, less than one third of the arable land used for a crop rotation plan has been mastered.

The BSSR Ministry of Agriculture, the republic association for seed production for agricultural crops and many of its subordinate farms are still not coping with the tasks for the production of high quality seed.

Just as in the past, many kolkhozes and sovkhozes, with the knowledge of Sel'khozhimiya, are not utilizing their mineral fertilizer in an efficient manner. The increase in the yield of field crop husbandry products throughout the republic is only 5.3 quintals of feed units per quintal of mineral fertilizer, compared to a norm of 7.4 quintals. Numerous facts are available concerning mismanagement in the use of mineral fertilizer.

A great amount of concern has been aroused in recent years over the fact that reductions are taking place in the yields being obtained from reclaimed lands. This is explained first of all by the unsatisfactory use of these lands. Many kolkhozes and sovkhozes are tolerating violations of the agricultural practices, they are not ensuring that the reclaimed lands are provided with complete dosages of organic and mineral fertilizers and they are carrying out

their sowing work using low quality seed. The planners and reclamation specialists are to blame for the fact that the technical level of a number of reclamation systems under construction is not in keeping with the modern requirements.

These and other shortcomings precluded the possibility of fulfilling the production plans for gross agricultural output during the first 2 years of the five-year plan. The kolkhozes and sovkhozes are still under an obligation to the state in connection with the sale of flax fibre, potatoes, sugar beets, vegetables, meat and milk. Each kolkhoz and sovkhoz and each rayon must analyze in detail the reasons for their falling behind, uncover reserves and define additional measures which will make it possible to fulfill the five-year plans for the production of products.

Much depends upon the local soviets of people's deputies, their executive and administrative organs, the permanent committees, the public amateur organizations and the workers in the rural areas.

The speaker directed attention to the valuable initiative displayed by the people's deputies of the Kroshinskiy Village Soviet in Baranovichskiy Rayon. They addressed an appeal to all of the people's deputies engaged in agricultural production, asking them to protect the principal source of all wealth -- the land, to multiply the return from each hectare and to utilize their land resources in a judicious and zealous manner. As a result of the initiative displayed by the deputies, 100 hectares of worthless land were improved and made available for agricultural use. Last year, this measure alone made it possible for the local Pobeda Kolkhoz to obtain additionally 882 quintals of milk and 279 quintals of meat.

The inclusion in a crop rotation plan of neglected and barren land is just one aspect of the work of a village soviet. Still another concern continues to be that of utilizing developed areas in a highly productive manner. The measures developed for this purpose are based upon recommendations expressed by kolkhoz members during brigade meetings and village gatherings. Their implementation will make it possible this year for a farm to obtain 34 quintals of grain crops, 220 quintals of potatoes and 11.5 quintals of flax fibre per hectare and to produce 280 quintals of meat and 900 quintals of milk per 100 hectares of agricultural land. The experience of the Kroshinskiy Village Soviet has been disseminated extensively throughout the republic.

A thrifty attitude towards the land and an increase in the return from a hectare of land alone will enable us to solve a most important task -- supplying feed for animal husbandry operations -- emphasized the speaker. Progress in this direction has already been noted. The procurement volumes for coarse feed and silage have increased considerably. The rotational use of pastures is being noticed more and more. Nevertheless, the majority of the farms are by no means able to satisfy completely the feed requirements for the public or private cattle.

This year the production of feed at each farm must be increased from 26 to 36 quintals of feed units per standard head annually and, just as important, the quality of this feed must be improved. We possess the potential for solving this task. What reserves are available for doing so?

Special attention should be given to the meadows and pastures, which constitute more than one half of the republic's feed lands. They must become the principal source for green feed in the summer and the supplier of raw material for coarse feed procurements in the winter. Beyond any doubt, the productivity of these lands can be doubled by means of timely and high quality regrassing operations, through the formation of richer grass stands and also by applying fertilizer to the entire area. Radical improvements are required in the use of grazing land. The haphazard grazing system which exists on many farms is leading to a loss of 30 percent in the weight being obtained. At the same time, the best available experience convincingly indicates that the systematic use of small portions of pasture land, together with the observance of other basic methods for tending pastures, will ensure the availability of a fine stand of grass throughout the summer right up until October and also high livestock productivity.

Important and laborious work must be carried out in connection with changing the structure of forage crops on arable land. The proportion of leguminous grasses must be raised to the level of 80 percent and both corn ears and fodder obtained. In addition, the areas used for semi-sweet beets must be expanded. This year another important reserve for increasing feed production on arable land will be placed in operation -- intermediate cruciferae family crops, in order to obtain at least two yields from one out of every 10 hectares of arable land.

I have discussed the feed problem in somewhat greater detail, continued the speaker, since it is the central problem with regard to increasing the production of animal husbandry products. And in our republic the proportion of such products, compared to the overall volume of agricultural products, is 59 percent.

The results of fulfillment of the plan for the first 6 months must not allow us to become too complacent. Indeed, during 5 months of the current year 32 rayons reduced their production of meat, 20 -- milk and 25 rayons reduced their milk yields per forage cow. As a rule, such a situation develops in those areas where the executive committees of the soviets analyze the status of affairs in a superficial manner, devote very little attention to the introduction of scientific achievements, leading experience or progressive technologies into operations or lower their demands on the personnel with regard to their assigned tasks.

The decisions handed down during the May (1982) Plenum of the CPSU Central Committee created favorable conditions for improving the economies of low-profitability and unprofitable farms. Bonuses have been introduced for them for adding on to the procurement prices, the overall total of which amounts to 555 million rubles for the republic. Approximately 100 million rubles are being allocated to kolkhozes annually from the state budget for the construction of housing, children's pre-school institutes, clubs and other installations of a cultural-domestic nature or the municipal economy. Maximum use must be made of the tremendous amount of assistance being provided by the state and also of the internal reserves which are available for improving economic activity. The initiative displayed by those residents of Grodno Oblast who this year resolved to raise all of the unprofitable farms to a profitable level is deserving of extensive support.

While concentrating attention on developing the public sector, as the leading trend to be followed for increasing the production of agricultural products, we must also make full use of other sources for augmenting the food fund. Here the private plots of citizens can provide great assistance. Last year these plots furnished 53 percent of the potatoes, 48 -- vegetables, 83 -- fruit and berries, 25.4 -- livestock and poultry (in live weight), 34.8 percent of the milk, 42.2 -- eggs and 21.3 percent of the wool. The soviets of people's deputies are furnishing them with assistance in acquiring seed and fertilizer and in tilling their tracts. Thirty five percent of the private plot land in the republic is located on crop rotation fields where all of the work is mechanized.

Skilful work is being carried out in this regard by the Executive Committee of the Obukhovskiy Village Soviet in Grodno Oblast and by the Administration of the Put' K Kommunizmu Kolkhoz, which is located on its territory. Here they have converted over to the cooperative form for raising potatoes for the private consumption by citizens. The cooperative's structure includes 327 families. The potato planting areas are located on crop rotation plan fields. All operations on the cooperative's tract -- fertilizer applications, planting work, tilling of the sowings, harvest operations -- are carried out simultaneously with these same operations on the kolkhoz tracts. The kolkhoz sows the private plots of the citizens in other crops. Upon completion of the harvest work, the expenses for cultivating the potatoes are computed. The members of the cooperative pay for these expenses and obtain finished and graded potatoes. The cost for a ton was 22 rubles and 12 kopecks. The advantages to be realized from this are mutual. On the one hand, the harvest is higher than that obtained from the private plots and, on the other, the workers are not troubled by daily concern for tending the crops and thus they work more fruitfully in kolkhoz production. Based upon the operational results for last year, the kolkhoz was awarded the challenge Red Banner of the CPSU Central Committee, the USSR Council of Ministers, the AUCCTU and the Komsomol Central Committee, with the executive committee being awarded the challenge Red Banner of the BSSR Council of Ministers and Belsovprof.

In the future, the soviet and economic organs must carry out improvements with regard to increasing the production of agricultural products on the private plots. Measures aimed at ensuring the availability of the required amounts of feed must be pointed out in the contracts for the raising of livestock on the private plots.

In increasing the production of agricultural products, an important role must be played by collective horticulture and gardening, rabbit raising and apiculture. Here practical assistance must be furnished by the soviet, cooperative and economic organs in acquiring young rabbits, cages, metal frames, beeives, fruit tree saplings and the necessary construction materials. The work would proceed much more rapidly and better if small-scale equipment was available in the domestic economy, equipment which could both ease and accelerate labor. Discussions have been underway for an extended period of time concerning the production of such equipment and yet the problem is being resolved extremely slowly. It is believed that Gosplan for the republic must apply itself to this problem in real earnest.

Great importance is being attached to the subsidiary farms of industrial enterprises, construction organizations, trade and public catering enterprises and educational institutes. A program has been prepared for their development up to the year 1990. The soviet organs and deputies must exercise constant control over their operations and furnish assistance in the form of seed and young livestock and also in resolving other problems.

Subsequently the speaker analyzed the problems concerned with ensuring that the rural areas were properly supplied with personnel. At the present time, there are almost 100,000 specialists working at the kolkhozes and sovkhozes. And although shortages are still being experienced in the case of highly skilled specialists, such as engineers, veterinary doctors, bookkeepers and others, nevertheless it can be said that our problem with regard to the number of specialists has for the most part been solved. The large scale nature of the tasks confronting us tends to place on the agenda the problem concerning the quality and efficiency of their work.

Fixed attention must be concentrated on the training and retention of cadres of machine operators, such that in the near future each kolkhoz and sovkhoz will have not less than three tractor-machinists for every two tractors. Fine examples can be found throughout the republic of purposeful work being carried out in the training and education of a worthy replacement shift of livestock breeders and workers in other specialties. In Ostrovetskiy Rayon, inter-school training-production combines have become centers for providing students with work-training. Approximately one half of the graduates of schools pass their qualification examinations in tractors and agricultural machines and remain to work at the kolkhozes.

I wish to direct attention, stated the speaker, to the very useful initiative displayed by the Editorial Board of the Newspaper ZNAMYA YUNOSTI /Banner of Youth/, which was supported by the soviet, komsomol and agricultural organs of Vitebsk Oblast. Since the end of last year, a komsomol-youth detachment consisting of readers of the newspaper has been working at the Oktyabr' Kolkhoz in Verkhnedvinskij Rayon. The young people had expressed a desire to work at a backward farm and to assist it in improving its status. This patriotic initiative has already found new followers. Still another komsomol-youth detachment has elected to work at the Krasnopol'ye Sovkhoz in Rossomskiy Rayon. Similar examples are to be found in Mogilev Oblast. Thus another form has been found for attracting youth to work in the rural areas.

In the interest of retaining personnel at their posts, more active work must be carried out by the local soviets in reorganizing the rural areas. Additional measures being undertaken at the present time in connection with increasing the volumes of housing construction in the rural areas are making it possible to build more than 7,000 homes of the farmstead type annually in addition to the plan and, over a period of 7 years, to provide each farm with an average of almost 20 apartments. A great amount of work remains to be carried out by the local soviets in connection with regulating and further improving the work being carried out in the rural areas by various services: public health, culture, trade, consumer services, enterprises of the housing and municipal economy and communications.

The task of achieving the goals established by the Food Program is associated with further improving the system of administration and the management mechanism. We are especially interested in improving services. It is through planning that we achieve improvements in the economic independence of kolkhozes and sovkhozes as the chief elements of the agroindustrial complex and in overcoming departmental isolation. The initial steps have been taken in this direction. In accordance with a recommendation by BSSR Gosplan and with the consent of the minister of land reclamation and water resources V.I. Pavlyuchuk and the chairman of Goskomsel'khoztekhnika B.M. Pozharskiy, 17 million rubles worth of capital investments are being allocated by these departments for the construction of housing at economically weak farms. With the active assistance of Minsel'khoz /Ministry of Agriculture/ and Goskomsel'khoztekhnika, detachments for the harvesting of forage crops have been created in 39 rayons throughout the republic. In accordance with schedules approved by the RAPO /rayon agroindustrial association/, these detachments are furnishing active assistance to backward farms in the procurement of feed.

Active work is being performed by the councils of the Vileyskiy, Grodnenskiy, Kletskiy, Lyakhovichskiy, Nevezhskiy and some other rayon agroindustrial associations. They are skilfully directing the efforts of all partners towards solving the chief task -- increasing the production of agricultural products, by searching for the reserves required for doing so. Unfortunately however, the RAPO councils in some areas have limited their activities to the distribution of equipment and solving problems of a secondary nature. This is basically an incorrect approach to the work. To display initiative, to overcome the use of a highly specialized approach and to avoid excessive administration and petty support for kolkhozes, sovkhozes and other organizations and enterprises belonging to the APK /agroindustrial complex/ -- these are all factors which lead to the development of a modern style of management.

Great reserves are embodied in the use of new forms for organizing labor using the collective contract method. Here a greater association is achieved between the activities of labor collectives and the final results of production operations. This year 3,600 production subunits are working on the basis of contracts and they are cultivating only 20 percent of the areas under crops. This is not enough. By next year this progressive form for organizing and stimulating labor must become a decisive factor.

The status of affairs in agricultural production, just as in any other type of production operation, is dependent upon the personnel involved and upon their attitude towards the work at hand, as well as upon discipline and initiative. Thus one of the principal trends in organizational and mass-organizational work by soviet organs continues to be that of raising the responsibility of the personnel, supporting creative search and disseminating the best experience.

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## AGRO-ECONOMICS AND ORGANIZATION

### WAYS TO IMPROVE OUTPUT-CAPITAL RATIO IN BELORUSSIAN AGRICULTURE

Minsk SEL'SKOYE KHOZYAYSTVO BELORUSSII in Russian No 6, Jun 83 pp 6-7

[Interview with N. F. Prokopenko, director of the Belorussian Scientific Research Institute of the Economics and Organization of Agriculture [BelNIIEOSKh], by V. I. Kazakevich: "Output-Capital Ratio: Ways of Improving It"]

[Text] /A MORE COMPLETE UTILIZATION OF PRODUCTIVE FIXED ASSETS IS OF EXCEPTIONALLY GREAT IMPORTANCE TO DEVELOPING AGRICULTURAL PRODUCTION. AN INTERVIEW ON THIS TOPIC WITH DOCTOR OF ECONOMIC SCIENCES N. F. PROKOPENKO, DIRECTOR OF THE BELORUSSIAN SCIENTIFIC RESEARCH INSTITUTE OF THE ECONOMICS AND ORGANIZATION OF AGRICULTURE, CONDUCTED BY A SPECIAL CORRESPONDENT OF THIS JOURNAL, IS PUBLISHED BELOW./  
[printed in boldface]

[Question] Nikolay Fedorovich, in recent years the fixed assets of the republic's kolkhozes and sovkhozes have increased markedly. Pursuant to the decisions of the May (1982) CPSU Central Committee Plenum, they are slated to continue increasing. In your opinion, what should be done first of all in order to maximize the yield of the productive fixed assets?

[Answer] In order to implement the Food Program, substantial extra funds are being allocated for increasing agricultural procurement prices, expanding the material and technical facilities of agriculture and solving social problems of the countryside.

At the same time, the effectiveness of all the measures taken is in the final analysis a function of the increase in the effectiveness with which the entire production potential of agriculture is utilized. This is particularly important considering that the share of labor expenditures in production outlays is declining, and this is not only a logical process but the principal source of the increase in labor productivity. The growth curve of the material-technical facilities is such that the proportion of expenditures of human labor on production will in the long run decline to 10 percent. Hence the indicators of the economic effectiveness of the utilization of resources will directly affect production cost, and consequently the formation, structure and yield of fixed assets are becoming increasingly important.

And yet, the output-capital ratio that is, the yield of gross output per 100 rubles of fixed assets in agriculture in this republic, dropped to 44 from 102 rubles during the 1970-1980 decade. This decline is traceable to the lag in the capital-labor ratio in agriculture compared with industry, the insufficient--in terms of comprehensiveness and normative level--provision of fixed assets to agriculture, the violation of sensible proportions in the

structure of the material-technical base of agriculture and the entire agro-industrial complex, and lastly also the faster rate of increase in the cost of new fixed assets compared with the growth rate of the productivity of farming and animal husbandry.

An increased effectiveness of the utilization of fixed assets in agriculture as a whole can be achieved by narrowing the gap between the quantities of fixed assets available to different farms and providing the conditions for an improved economic performance of the kolkhozes and sovkhozes located on poorer lands. To this end, the BelNIIEOSKh recommends that the allocation of capital outlays for the renovation of production facilities on farms of various oblasts be tailored to the actual extent of these facilities, their depreciation, the capital requirement of buildings, and the possibilities for their rational long-term utilization as adapted to the application of the achievements of scientific and technical progress.

The part of allotted capital outlays remaining after the outlays on the replacement of worn fixed assets are deducted should be distributed among oblasts in proportion to the increase in gross output with allowance for a correction factor reflecting the differences in the specialization of agricultural production. That correction factor is represented by the ratio of the normative weighted mean of the capital-output ratio, in breakdown by oblast, to the mean republic level.

For the republic as a whole, out of the overall volume of capital outlays earmarked for the further development of farming, it is recommended that 75-78 percent be allotted for measures to improve soil fertility and acquire agricultural equipment.

In view of the growing concentration of capital investments, it is extremely important to provide every farm with at least a minimum of capital for the direct reproduction of assets. Calculations show that for a farm with average production parameters in this republic this level amounts to 160,000 rubles, of which 123,000 rubles for production needs and 37,000 for non-production needs.

In the interest of increasing output-capital ratio radical improvements have to be made in the allocation of capital outlays among the oblasts. Henceforth, on the recommendation of the BelNIIEOSKh, 58-60 percent of all investments for production purposes will be allocated to crop growing, rather than 38-40 percent as previously. Calculations show that in many of the republic's rayons the proportion of feed production in total outlays on crop growing should be increased to 68-70 percent in the next few years.

This restructuring of capital outlays will contribute to strengthening the material-technical base of crop production as a decisive factor in implementing the Food Program. During the 11th and 12th Five-Year Plan periods the ratios between investments in the construction of animal-husbandry complexes and the modernization of existing livestock farms will be refined. The animal farms will be adequately provided with the necessary resources, and the remaining funds will be spent on the construction of the complexes. Plans exist to gradually eliminate the disproportion between fixed assets and liquid capital.

It is highly important to eliminate the existing discrepancy between the growth rates of productive and non-production fixed assets.

[Question] Please describe this in more detail.

[Answer] Studies have shown that the effectiveness of fixed assets in agriculture is greatly affected by the socio-economic factor. Exceptional importance was attached to this problem at the 26th CPSU Congress and the May (1982) party Central Committee Plenum. Its solution hinges on the assurance of adequate and highly productive manpower resources. This problem is also particularly important to the Belorussian SSR.

Analysis shows that manpower shortages are beginning to be felt even at those kolkhozes and sovkhozes of the republic that have been growing vigorously in recent years. The decline in the manpower resources of agriculture is due to a large number of reasons, but one major reason is the lag in meeting the principal social needs such as modern housing and educational, cultural and consumer services as well as medical care.

The growing efflux of manpower resources is causing major shortages of labor force in the Vitebsk, Mogilev and Gomel oblasts as well as in a number of rayons of Minsk Oblast. The more ablebodied and demographically active part of the population is leaving the countryside--persons 16 to 40 years old, with technical skills. The high turnover of agricultural machinery operators produces a particularly tangible negative effect on the level of equipment utilization and economic performance. The growing influx of complex modern equipment to the kolkhozes and sovkhozes requires increasing the numbers of young equipment operators and providing them with advanced training as well as keeping them on their jobs. That is why the problem of rural manpower has to be solved purposefully and tenaciously. Success in resolving this problem largely hinges on augmenting the non-production type fixed assets in the countryside (housing, kindergartens, social, cultural and consumer services, etc.).

As shown by studies, 50 rubles of non-production assets--compared with 20 at present--is required for every 100 rubles of production assets in BSSR agriculture. Of exceptional importance to the solution of this crucial problem is the procedure, adopted at the May (1982) CPSU Central Committee Plenum, for financing the construction of housing, schools and preschools, clubs and other cultural-communal facilities, as well as intra-farm roads in the kolkhozes operating at a loss. These projects will be funded from the state budget, which will also subsidize the expenditures of these kolkhozes on the upkeep of preschools, cultural and educational institutions and Pioneer camps. Each year the state budget will earmark a total of 3.3 billion rubles in subsidies for such kolkhozes.

[Question] A major responsibility for assuring a more complete and rational utilization of the production-economic potential and resources is borne by the new agricultural control agencies--the RAPO [Rayon Agro-Industrial Association] councils. What can they accomplish immediately?

[Answer] The principal aspect of RAPO activities is the coordination and focusing of efforts of all the partners in the rayon's agro-industrial complex with the object of increasing the end-output. The first steps taken by the RAPOs indicate that they are endowed with substantial organizational and economic possibilities for solving this problem on the basis of an improved utilization of all resources. The RAPOs are gradually working out a mechanism of economic relations between agriculture and the branches serving it. A special feature of

that mechanism is that it is geared to provide incentives to all the branches of the APK [Agro-Industrial Complex] for prompt and improved services to agriculture. The limited experience gained so far by the rayon agro-industrial associations demonstrates that within the framework of the RAPO the kolkhozes and sovkhozes can obtain greater assistance from their partners in implementing the Food Program. It is the primary duty of RAPO councils to effectively exercise the rights and duties with which they are endowed. This should be a constant goal of their multi-faceted activities, and this provides the basic guarantee of their success, now and in the future.

[Question] A substantial role in improving the utilization of fixed production assets is played by the specialization and concentration of production as well as by co-production of different farms. What positive effects are observed in this respect?

[Answer] An active and purposive specialization and concentration of production along with inter-farm co-production is the paramount and indispensable prerequisite for implementing the Food Program. The effect of this process on the increase in output and improvement in economic indicators of the branch is becoming increasingly evident.

The degree of the development of specialization and concentration of production should rigorously correspond to the level of productive forces, without either overtaking it or lagging behind it. For example, all animal husbandry cannot be concentrated on complexes unless an adequate quantity and quality of fodder is available; the concentration of the planting of sugar beets may prove premature unless high-capacity equipment and herbicides for growing that crop are available.

Much work has been done to develop the specialization and increase the concentration of agricultural production. In farming, zones of intensive growing of flax, sugar beets, vegetables and potatoes have been determined; in livestock, zones of dairy cattle and poultry raising, meat-dairy cattle raising with developed hog raising, and meat-dairy cattle raising and hog raising have similarly been determined.

Flax planting is now sited on 1,351 farms (in 1975 flax was grown by 1,979 kolkhozes and sovkhozes) and the area planted with flax per farm has been increased by a factor of 1.4 to 172 hectares. The proportion of that area to the overall area of these farms reached 7.9 percent. Experience shows that wherever the necessary base for flax growing has been achieved, high results are produced. For example, at the "Put' Lenini" Kolkhoz the area planted with flax occupies 420 hectares or 15.6 percent of the kolkhoz's plowland, and the yield per hectare reaches 10.7 quintals of flax fiber and 4.5 quintals of seeds.

Positive changes have taken place in beet growing. The average area planted with beets has increased to 150 hectares compared with 92 hectares per farm in 1975. At the same time, the number of the farms growing this crop has dropped to 360 from 617, while yields rose to 267 from 217 quintals.

Crop seed growing is being industrialized and seed production is being concentrated on special farms.

The growing tendency toward the specialization of animal husbandry at present manifests itself in the planned reduction in the number of commercial animal

husbandry sectors at the kolkhozes and sovkhozes and the conversion of part to specialized livestock farms concentrating on the principal branches of production as well as the broad expansion of branch and stage specialization and the establishment on this basis of highly specialized enterprises. Currently in this republic operate 258 special beef-producing farms, of which 155 exercise the functions of inter-farm enterprises.

Specialized farms and inter-farm enterprises for the production of animal-husbandry output attain higher results than their non-specialized counterparts. Noteworthy in this respect is the "Demekhi" Sovkhoz in Rechinskiy Rayon, to which the rayon's farms transferred 9,000 head of cattle for fattening and which achieved a mean daily weight gain of 961 grams per head of cattle and sold 4,300 tons of beef to the state. Based on the price fixed and owing to the distribution of profits, the participating farms were paid 3.6 million rubles.

Specialization in dairy production, hog raising and sheep raising also is growing in this republic. Poultry raising is chiefly concentrated within 9 production associations and 17 poultry raising farms of the BSSR Ptitseprom [Poultry Raising Industry Administration].

To assure a high effectiveness of the work on the specialization and concentration of production, the top priority in animal husbandry should be given to solving the feed problem and in farming, to means of increasing soil fertility.

[Question] And of course, adherence to technological and work discipline is a highly important factor.

[Answer] Incontestably. The tightening of technological discipline is of primary importance to solving cardinal problems of feed production, to the preparation and application of organic fertilizers and the utilization of mineral fertilizers.

Technological discipline has become particularly important at industrialized livestock farms. The point is that their personnel is being provided with increasing amount of highly productive equipment and the number of head of livestock tended per employee is rising. Now the greater the capacity of the equipment and the more productive the livestock, the greater are the losses of production due to various deviations from technological requirements.

One cannot but mention the growing importance of technological and work discipline as a whole to all production processes in farming and animal husbandry. Hence, it is extremely important to complete the pilot tests of the comprehensive system for the control of the quality of labor and production, developed by Belorussia's scientists and to assure its gradual introduction on every farm in the republic.

[Question] What can be stated about such an important factor as improvements in the organization of labor?

[Answer] Owing to the growth of the material-technical base of agriculture and the increase in the share of mechanized operations, recently it has become more possible to apply progressive forms of the organization of labor as the most important condition for increasing labor productivity and the output-capital ratio. Today the collective contract has become especially important. At present it is particularly important to link the interest of the agricultural worker to the end-results of production. The experience gained in

applying the collective contract system in the Dobrushskiy, Gomel'skiy and other rayons of this republic demonstrates its great effectiveness. In all collectives operating on the basis of that system work productivity and wages have increased and fixed production assets are utilized better. This year the collective contract system has been broadly introduced on the republic's socialized farms. Premises for its introduction have been drafted with respect to both the organization of labor and work incentives.

The collective contract system is also highly important in animal husbandry. A growing number of regular and industrialized livestock farms are converting to this progressive form of the organization of labor, which will serve not only to increase output but also to markedly enhance the output-capital ratio.

The major measures envisaged in the decisions of the May (1982) CPSU Central Committee Plenum relating to the implementation of the Food Program provide a favorable climate for an efficient utilization of the production potential of agriculture. It is the primary duty of agrarian scientists, farm managers and experts and all agricultural workers to assure a continuing high rate of growth of this highly important branch of the economy.

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## AGRO-ECONOMICS AND ORGANIZATION

### ACCOUNT OF LVOV OBLAST PRIVATE SECTOR DEVELOPMENT

Moscow KHOZYAYSTVO I PRAVO in Russian No 6, Jun 83 pp 6-9

Article by M. Vasyliv, secretary of the Lvov Oblast Committee of the Communist Party of the Ukraine: "A Reserve -- The Private Sector"/

Text Lvov Oblast is one of the country's most densely populated oblasts. On the average there are 120 individuals living on each square kilometer of its territory, with roughly one out of every two being a rural resident. But its industrial potential is great. It is sufficient to state that during the past few years alone our chemical and coal industries and instrument and machine-building have undergone intensive development. The need for supplying the municipal population with food products is conditioned by the development of such trends in agriculture as potato, vegetable and animal husbandry production. The kolkhozes and sovkhozes are fully meeting the state's procurements of grain and technical crops and 86-99 percent of the meat, milk eggs and vegetables.

Their logistical base is being strengthened. Over the past 15 years the fixed productive capital and electric power consumption have increased by a factor of 3.5 here. The machine-tractor pool has been renewed almost completely. As a result, gross agricultural output is constantly increasing. For example, during the 10th Five-Year Plan it increased by 11.1 percent compared to the 9th Five-Year Plan and labor productivity -- by 23 percent. During the 11th Five-Year Plan the farm and field workers were confronted by the important task of further increasing the volumes for the production and procurements of products.

As is known, in the Summary Report of the CPSU Central Committee to the 26th party congress it is pointed out: "The kolkhozes and sovkhozes continue to be the foundation of the socialist economy. But this is by no means meant to imply that the potential of the private plots can be neglected. Experience underscores the fact that such plots can provide substantial assistance in the production of meat, milk and certain other products." During a speech delivered in mid April of this year before a meeting of the 1st secretaries of central committees of communist parties of union republics and kray and oblast party committees, during which certain practical problems associated with agricultural development and implementation of the Food Program were reviewed, the general secretary of the CPSU Central Committee Comrade

Yu.V. Andropov emphasized that in improving the supply of food goods for the population more complete use must be made of local resources, particularly the opportunities offered by the private plots.

Aware of this fact, the oblast party organization and the soviets of people's deputies are of the opinion that, in addition to developing public production, an important source for augmenting the food product resources is that of the private sector.

In all, we have 359,000 plots of kolkhoz members, sovkhoz workers and other citizens who reside in the rural areas. They involve the use of 99,000 hectares of land, or 8.4 percent of all of the oblast's agricultural land. The population owns 428,200 head of large-horned cattle, 217,700 hogs and more than 5 million poultry. It bears mentioning that the dimensions of the private plots and the number of livestock being maintained on a private basis are differentiated by natural-economic zones. The general meetings of kolkhoz members or meetings of authorized representatives, based upon the specific conditions, assign tracts of pasture land for the grazing of privately owned livestock. The expenditures for radical and surface improvements to the pastures assigned for this purpose are set forth in the production-financial plans of the kolkhozes. The average annual gross output of the private plots during the 10th Five-Year Plan was computed at 509.6 million rubles. Last year these plots provided 38 percent of the state procurements of potatoes, fruit and berries -- 68.3, meat -- 5.5 and milk -- 15.5 percent. In addition, a considerable quantity of meat was sold at markets and 26,800 tons were procured in live weight by elements of consumer cooperation.

The specialists are of the opinion that the opportunities for expanding the production and procurements of agricultural products on the private plots of citizens in our oblast are far from being exhausted. This is why, in carrying out the decree of the CPSU Central Committee and the USSR Council of Ministers dated 14 September 1977 (Decree No. 843) entitled "The Private Plots of Kolkhoz Members, Manual and Office Workers and Other Citizens and Collective Horticulture and Gardening" and also Decree No. 27 dated 8 January 1981 entitled "Additional Measures for Increasing the Production of Agricultural Products on the Private Plots of Citizens," the party, soviet and economic organs in Lvov Oblast undertook further steps aimed at achieving more efficient use of the opportunities afforded by the private plots of the population.

Towards this end, we had the rural residents fill out a questionnaire in early 1981. They were asked, for example, which types of livestock and poultry the citizens are interested in raising, during which periods should the young stock be procured and under what conditions, what means are available, in their opinion, for improving the supply of feed for livestock being maintained on private plots and so forth. Taking into account the desires so expressed, 4,700 head of young large-horned cattle stock were sold to the population in 1981, or 3,700 more than in 1980 and greater than the figure for 1970 by a factor of four and also 115,900 young pigs and 7.7 million head of poultry. It bears mentioning that the livestock were sold first of all to those families which lacked them entirely. Last year 125,200 young pigs were sold to the population and young poultry stock -- 8.7 million head. It should be added that the Krolikovod Society in turn is selling 14,000 rabbits to the population.

Fine experience in the efficient use of the reserves offered by private plots has been accumulated at the Kolkhoz imeni Chapayev in Brodovskiy Rayon. Here the procedures are as follows. Young large-horned cattle stock are purchased from rural residents on the basis of a contract and thereafter left for maturing. In order to ensure intensive fattening, the owner is sold from 2-4 quintals of concentrated, coarse and succulent feed at cost, haying and pasture lands are made available and zootechnical and veterinary services are made available for the animals. When the young bulls have achieved a weight of not less than 400 and the heifers -- 350 kilograms, then they are removed from the fattening regime in accordance with the contract. The payment is made according to the state procurement prices and, in addition, the owner, based upon a decision handed down during a general meeting, has 15 days off added to his overall service record. The effectiveness of this system is very high. The production cost for a quintal of weight increase in the cattle is 160 rubles and the profitability -- approximately 40 percent.

The experience accumulated at the Kolkhoz imeni Chapayev is being employed extensively on other farms throughout the oblast. Today practically every kolkhoz and sovkhoz is carrying out similar work. For example, 63,900 contracts were concluded in 1981 for the fattening of cattle compared to only 48,300 in 1980 and last year the oblast's population sold 51,000 head of large-horned cattle at a live weight of 16,000 tons.

This year more than 70,000 head of large-horned cattle will undergo such fattening. In order to raise the interest of kolkhoz members and sovkhoz workers in the production of animal husbandry products, the farms are making extensive use of still another form -- the issuing of young stock to the population free of charge. Here the cost of the animals is obtained following the fattening work -- it is collected later during the final accounting.

The population is being provided with assistance in procuring feed. In conformity with the decree of the CPSU Central Committee and the USSR Council of Ministers entitled "Measures for Intensifying the Material Interest of Agricultural Workers in Increasing the Production of Goods and Raising Its Quality," approved during the May (1982) Plenum of the CPSU Central Committee, considerable increases have taken place in the amounts of payments in kind based upon the operational results. Resolution No. 11 of the oblast executive committee, in execution of the above decree, decreed that sovkhozes and other state agricultural enterprises are to issue in the form of wages up to 1.5 kilograms of grain for a completed shift-norm to farm workers and also to those who participate in harvesting the crops. It was decided that the grain expenditures for the mentioned purposes must not exceed 11.9 percent of the planned gross yield. The norms are differentiated by zones of the oblast. In addition, authorization has been given for issuing grain, up to 15 percent of the above-plan gross yield, free of charge to brigade and team workers engaged in the growing of grain.

Many kolkhozes and sovkhozes have found it possible to allocate a portion of their public pastures for the grazing of cattle and to sell to the population one tenth of the hay, haylage and silage and one fifth of the straw procured on the public farms. As a result of the use of legal norms (for example, the 15 January 1981 Ukase cited the conditions for ensuring the availability of feed for livestock and poultry being maintained on private plots), during the

last 2 years alone the pasture lands allocated for the grazing of private livestock were increased by a factor of 1.5. Last year the population was presented with 27,700 hectares of haying land, it purchased 144,000 tons of coarse and 42,300 tons of succulent feed and it was issued 50,700 tons of concentrated feed in the form of counter sales for products sold to the state.

Mention should be made of the fact that in accordance with the decree of the CPSU Central Committee and the USSR Council of Ministers entitled "Additional Measures for Increasing the Production of Agricultural Products on the Private Lots of Citizens," credit is being made available for those kolkhoz members, sovkhoz workers and office workers desiring to procure livestock. During 2 years of the present five-year plan alone, 587,000 rubles were allocated to the population for this purpose.

The rural residents quickly sized up the advantages of this arrangement. At a majority of the populated points the personnel began acquiring cows and hogs, even families which had never maintained them in the past.

The work being carried out by cooperative organizations is promoting growth in the number of livestock and an increase in the volumes of livestock products being procured from the population. For example, last year the quantity of agricultural products procured from the population was greater by a factor of 1.5 -- for an overall total of 53 million rubles -- than the figure for 1975. Cooperation also acquires from the population 80 percent of all potato procurements in the oblast and it is the principal purchaser of eggs, wool, honey, berries and mushrooms.

We are striving to strengthen and expand the logistical base for consumer cooperation. In particular, an increase has taken place in the number of receiving points, in stations for the processing of livestock and poultry and also in the number of trade network enterprises. At the present time, there are 437 permanent and 982 seasonal procurement points in consumer cooperation in the oblast. The plans call for 117 more to be built prior to the end of the five-year plan.

The practice of concluding long-term contracts with citizens for the production and procurement of products is being employed more and more. Those who conclude contracts with kolkhozes and sovkhozes or procurement organizations for the production of animal husbandry products or for the growing of potatoes and vegetables are allocated additional tracts of land from among the low productivity lands of kolkhozes and sovkhozes, the unused areas of industrial, transport and other enterprises and organizations and the available lands of populated points for temporary use. The size of these tracts of land -- from 0.1 to 0.15 hectares -- was established by Resolutions Nos. 331 and 86 of the oblast executive committee, dated 7 July 1982 and 25 February respectively.

Last year, based upon the standard contracts, the procurement organizations of consumer cooperation concluded 186,000 contracts and procured 14,200 tons of meat products, 8.4 million eggs, 63,700 tons of potatoes and 4,900 tons of fruit and berries. In the interest of developing greater interest among the population in the sale of these products throughout the oblast, a counter trade in industrial goods, mixed feed and fertilizers was organized and the citizens were provided with packaging materials and transport equipment.

Collective horticulture and gardening are being further developed throughout the oblast. We have created 368 horticultural collectives, to which 2,000 hectares of land have been assigned. Last year, based upon contracts, they sold 306 tons of fruit and berries to the state and they supplied children's institutes and hospitals with 24.3 tons free of charge.

The party, soviet and economic organs are devoting a great amount of attention to the efficient use of private plots. In the case of densely populated Lvov Oblast, special importance is being attached to a thrifty attitude being displayed towards every one hundredth portion of a hectare, regardless of who is using it. We are striving to take full advantage of all rights extended by law for this purpose. In accordance with Point 18 of Decree No. 27 of the CPSU Central Committee and the USSR Council of Ministers dated 8 January 1981, credit is extended to horticulturists for acquiring or building small houses and also for developing their tracts. The kolkhoz and sovkhoz specialists provide the citizens with methodological assistance in the interest of ensuring the best use of the private plots and the state service for the protection of plants and the veterinary service wage a campaign against agricultural plant and animal pests and diseases. It is noted that all prophylactic and medical measures are carried out free of charge.

The development of private plots has made it possible to utilize more completely the labor of persons with limited activity (pensioners, elderly persons, invalids and juveniles) and, in the final analysis, to increase the production and procurement volumes for the agricultural products.

In analyzing the experience that has been accumulated in developing the private plots, the party committees and the local soviets are presently devoting their efforts towards solving more completely those problems concerned with motivating the collectives of industrial enterprises, schools and young naturalist stations to participating in this work. There are also other reserves the use of which promises to produce considerable advantages. Definite difficulties exist in connection with satisfying the population's requirements for horticultural and gardening implements and mineral fertilizers.

I would like to comment upon the social importance of organizing private plots. Indeed, pensioners and young children participate in the work of tending a private plot and domestic economy livestock. Youth who become accustomed to such work at a young age are more willing at a later date to move out onto the fields and livestock farms. Thus, in developing the private plots of the population, we are solving not only economic problems but social ones as well.

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## WATER RESOURCES

### SCIENTIFIC UNIT TO STUDY ARAL SEA LEVEL

Moscow NEDELYA in Russian No 19, 9-15 May 83 p 4

[Article by Boris Samoylenko "Concern for the Aral"]

[Text] As a result of intensive exploitation of newly-irrigated lands and increased consumption of the waters of the Amu Darya and Syr Darya rivers the level of the Aral Sea has come down, it has become more salty and its spawning grounds have shrunk in size. That is why scientists from Kazakhstan, the RSFSR, Uzbekistan and other republics are working to alleviate or liquidate the negative aftereffects of these changes. Their research is in the main directed at regulating the water balance of the reservoir and preventing the desiccation of the Aral region.

These scientists hold that in the not too distant future the surface area of the Aral Sea may dwindle to one half and its volume to one third of what they are at present. The Aral will become two reservoirs: the Little Sea with a volume of 30 and the Big Sea with a volume of 270 cubic kilometers. The latter will consist of two parts -- the deep western and the shallow eastern. They will be connected by a narrow strait between Vozrozhdeniye Island and the Kulanda Peninsula. The Little Sea will hive off in the region of Kokoral Island and the Berg Strait. In the scientists' opinion, to preserve the fish-producing potential of these reservoirs the mouth of the Syr Darya should be slightly moved to make it flow into the Little Aral. To accumulate the river spill and the drainage waters from the Kazalinsky irrigation system a weir should be constructed in the Berg Strait. This engineering transformation of the aquatorium will create favorable conditions for the breeding of fish impervious to salt.

Another fish-producing reservoir can be created by cutting off the Aksuabye Gulf with a regulatory spillway and channeling the Amu Darya into the gulf. Surplus waters will spill into the deep western part of the sea.

The floodgates of the weirs will make it possible to desalinate the water of the reservoirs because the water flowing in will be fresher than that spilled off. The Aral of today will thus be

transformed into two reservoirs of low salinity whose biological productivity, what with the thermal resources on hand, can prove very high. Working on these projects are geography and water resources institutes of the Academies of Science USSR and KazSSR, the Ministries of Water Resources USSR and KazSSR as well as a number of the country's research and design institutes.

To forestall desiccation of the Aral basin plans must be drawn up to channel part of the waters of Siberian rivers to this area. This will make up for the shortage of water in the region and allow the irrigation of new lands because millions of hectares both in the ancient and the present-day deltas of the Syr Darya are well suited for the cultivation of rice, melons and forage.

A special station is to be created on the eastern shores of the Aral which will have a network of substations in the area, including the Karakalpak ASSR. These will conduct a comprehensive study of arrefaction processes, work out countermeasures and test their effectiveness on the spot.

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